What is claimed is:

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- 1. An anti-bacterial polymer consisting of the vapor deposition-polymerization reaction product of a diaminobenzoic acid monomer or halogen atom-containing diamine monomer and a monomer reactive with the diaminobenzoic acid monomer or halogen atom-containing diamine monomer.
- 2. The anti-bacterial polymer as set forth in claim 1, wherein the diaminobenzoic acid monomer is a member selected from 2,3-diaminobenzoic acid, 2,4-diaminobenzoic acid, 2,5-diaminobenzoic acid, 3,4-diaminobenzoic acid and 3,5-diaminobenzoic acid.
- 3. The anti-bacterial polymer as set forth in claim 1, wherein the halogen atom is selected from the group consisting of fluorine, chlorine, bromine, and iodine.
- 4. The anti-bacterial polymer as set forth in claim 1, wherein the halogen atom-containing diamine monomer is a monomer selected from 4, 4'-methylenebis(2-chlorobenzene amine), 3, 3'-dichloro-4, 4'-diaminodiphenyl ether, and 5-chloro-mphenylenediamine.
- 5. The anti-bacterial polymer as set forth in any one of claims 1 to 4, wherein the monomer reactive with the diaminobenzoic acid monomer or halogen atom-containing diamine monomer is a member selected from tetracarboxylic acid dianhydrides, diisocyanates, acid chlorides and aldehydes.
- 6. The anti-bacterial polymer as set forth in any one of claims 1 to 5, wherein the anti-bacterial polymer is a polyimide, a polyamide, a polyurea or a poly(azomethine), the polyimide is a copolymer comprising at least one structural unit represented by the following general formula (I):

(in the formula (I), Ar and Ar' each represents an aromatic or aliphatic group, and

R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine); the polyamide is a copolymer comprising at least one structural unit represented by the following general formula (II):

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(in the formula (II), Ar and Ar' each represents an aromatic or aliphatic group, and R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine); the polyurea is a copolymer comprising at least one structural unit represented by the following general formula (III):

(in the formula (III), Ar and Ar' each represents an aromatic or aliphatic group, and R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine); and the poly(azomethine) is a copolymer comprising at least one structural unit represented by the following general formula (IV):

(in the formula (IV), Ar and Ar' each represents an aromatic or aliphatic group, and R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine).

7. A method for the preparation of an anti-bacterial polymer comprising the step of subjecting a gas obtained by evaporating a diaminobenzoic acid monomer or

halogen atom-containing diamine monomer and a gas obtained by evaporating a monomer reactive with the diaminobenzoic acid monomer or halogen atom-containing monomer to vapor deposition-polymerization, in a vacuum, to thus form an anti-bacterial polymer.

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- 8. The method for preparing an anti-bacterial polymer as set forth in claim 5, wherein the diaminobenzoic acid monomer is a member selected from 2,3-diaminobenzoic acid, 2,4-diaminobenzoic acid, 2,5-diamino-benzoic acid, 3,4-diaminobenzoic acid and 3,5-diaminobenzoic acid; the halogen atom-containing diamine monomer is a member selected from 4, 4'-methylenebis(2-chlorobenzene amine), 3, 3'-dichloro-4, 4'-diaminodiphenyl ether, and 5-chloro-m-phenylene-diamine and the monomer reactive with the diaminobenzoic acid monomer or halogen atom-containing diamine monomer is a member selected from tetracarboxylic acid dianhydrides, diisocyanates, acid chlorides and aldehydes; and the anti-bacterial polymer is a polyimide, a polyamide, a polyurea or a poly(azomethine).
- 9. The method for preparing an anti-bacterial polymer as set forth in claim 5 or 6, wherein the polyimide is a copolymer comprising at least one structural unit represented by the following general formula (I):

(in the formula (I), Ar and Ar' each represents an aromatic or aliphatic group, and R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine); the polyamide is a copolymer comprising at least one structural unit represented by the following general formula (II):

(in the formula (II), Ar and Ar' each represents an aromatic or aliphatic group, and R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine); the polyurea is a copolymer comprising at least one structural unit represented by the following general formula (III):

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(in the formula (III), Ar and Ar' each represents an aromatic or aliphatic group, and R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine); and the poly(azomethine) is a copolymer comprising at least one structural unit represented by the following general formula (IV):

(in the formula (IV), Ar and Ar' each represents an aromatic or aliphatic group, and R is COOH or a halogen atom selected from fluorine, chlorine, bromine, and iodine).

- 10. An anti-bacterial polymer film consisting of an anti-bacterial polymer as set forth in any one of claims 1 to 6.
- 11. A method for preparing an anti-bacterial polymer film comprising the step of subjecting a gas obtained by evaporating a diaminobenzoic acid monomer or halogen atom-containing diamine monomer and a gas obtained by evaporating a monomer reactive with the diaminobenzoic acid monomer or halogen atom-containing diamine monomer to vapor deposition-polymerization on a substrate, in a vacuum, to thus form an anti-bacterial polymer.
- 12. The method for preparing an anti-bacterial polymer film as set forth in claim

11, wherein the diaminobenzoic acid monomer is a member selected from 2,3-diaminobenzoic acid, 2,4-diamino- benzoic acid, 2,5-diaminobenzoic acid, 3,4-diaminobenzoic acid and 3,5-diaminobenzoic acid; the halogen atom-containing diamine monomer is a member selected from 4, 4'-methylenebis(2-chlorobenzene amine), 3, 3'-dichloro-4, 4'-diaminodiphenyl ether, and 5-chloro-m-phenylene-diamine; the monomer reactive with the diaminobenzoic acid monomer or halogen atom-containing diamine monomer is a member selected from tetracarboxylic acid dianhydrides, diisocyanates, acid chlorides and aldehydes; and the anti-bacterial polymer is a polyimide, a polyamide, a polyurea or a poly(azomethine).

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13. An article characterized in that it comprises, on the surface thereof, an anti-bacterial polymer film comprising an anti-bacterial polymer as set forth in any one of claims 1 to 6.